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# CIWMB
# Fiscal Impact Report:

# Out-of-State Waste Disposal

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INTEGRATED
WASTE
MANAGEMENT
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# CIWMB Fiscal Impact Report: The Economics of Out-of-State Waste Disposal

## INTRODUCTION

Rates charged for non-hazardous solid waste disposal have increased dramatically in the last few years. As a result counties throughout California have been looking into alternative methods of waste disposal. One option currently being considered is the prospect of exporting solid waste to states with lower tipping fees. The economic viability of export is contingent upon:

1) landfill capacity of out-of-state landfills,
2) tipping fees outside of California,
3) transportation rates,
4) tipping fees within California, and
5) landfill closure schedules within California.

Those jurisdictions facing scarce landfill capacity and tip tees in excess of the total cost of out-of-state landfill disposal are those most likely to implement some type of out-of-state disposal program.

The purpose of this report is to outline the effects which the hauling of municipal solid waste out-of-state could have on the California Integrated Waste Management Board's (CIWMB) Integrated Waste Management Account (IWMA). Out-of-state waste export will have an impact because IWMA fees are currently being collected at landfills, which will be bypassed by exported waste. This report analyzes out-of-state landfill capacity and tipping fees, options available to recapture fees on exported waste, waste management fees at transfer stations, and waste management systems and international export of waste. The report determines that the best alternative to recapture fees on exported waste is to collect a lesser fee for exported waste, at transfer stations which export such waste, and to continue to collect the standard fee at the landfill. The report concludes that the discounted fee should be approximately 5.9% less than the standard fee, which is currently $1.34, to account for a lesser degree of services provided for waste which is exported out-of-state. This alternative would require legislation in order for it to be implemented.

## 1. OUT-OF-STATE LANDFILL CAPACITY AND TIPPING FEES

Presently, the most likely out-of-state destinations for California's waste are sites in eastern Utah's East Carbon Landfill, southeastern Washington State's Roosevelt Landfill, western Arizona's La Paz Landfill, Oregon's Columbia Ridge Landfill and Nevada's Lockwood Landfill. All are currently interested in long-term disposal contracts. Officials from East Carbon believe that their current operational optimum is approximately 20,000 tons of solid waste per day.[1] The optimal operational capacity is restricted only by East Carbon's ability to operate efficiently. Since total capacity can be expanded by 50% without applying for additional permits in the state of Utah, it is assumed that daily capacity can also be expanded

by 50%. It is assumed that the facility would have difficulty physically accommodating the additional staff and machinery if more than 30,000 tons were landfilled daily.[2] The life of the Utah facility is estimated to be approximately forty to fifty years.[3] Comparable data were found for Roosevelt Landfill, La Paz Landfill and Columbia Ridge Landfill, all of which have no limit to the tons they may take in per day. Officials from Lockwood Landfill feel their maximum intake is approximately 20,000 tons per day.[4] Roosevelt Landfill, La Paz Landfill, Columbia Ridge Landfill, and Lockwood Landfill have a capacity of approximately 120 million tons, 5 million cubic yards, 100 million tons and 44 million tons, respectively. La Paz Landfill anticipates expanding to have a total capacity of 100 million cubic yards. Lockwood Landfill has a total permitted landfill space of 1535 acres, approximately 200 million tons capacity. However, currently they have only 555 acres, 43.7 tons capacity, in compliance with SubTitle D and excepting waste.[5] Assuming an operational optimum intake of 20,000 tons per day at Roosevelt Landfill, La Paz Landfill and Columbia Ridge Landfill, current capacity projections for out-of-state landfills range from 100,000 tons per day in the near-term to 110,000 tons per day in the long-term.

The East Carbon, Utah landfill is currently quoting transportation by rail and tip fees that total approximately $40 per ton.[6] Costs not factored into this rate include transportation to the loading facilities, construction of loading facilities, specially constructed railroad cars and any type of transport fees levied on the waste as it travels to its destination. Roosevelt Landfill is currently quoting approximately $45 to $50 per ton for transportation by rail and tip fees.[7] La Paz Landfill is currently quoting approximately $45 per ton for transportation by rail and tip fees.[8] Columbia Ridge Landfill is currently quoting approximately $40 for transportation by rail and tip fees.[9] Lockwood Landfill is currently quoting $10 per ton for tip fees only.[10] In order to estimate the maximum potential impact on the IWMA, several assumptions will be made that minimize waste export cost estimates. For the purpose of this analysis we will consider $45[11] a ton to be the equivalent of a gate fee within each county's jurisdiction since transportation must be provided whether the waste is taken directly to a landfill or to a loading facility for transportation by rail. Construction of loading facilities and specially constructed railroad cars are capital goods that incur costs which can be amortized over several years. Which would make them negligible on a per ton basis. It is currently impossible to pre-determine what fees, if any, will be levied on rail hauled waste, so again, the cost is assumed to be negligible. In order to determine which California counties will find it cost effective to haul waste out-of-state, the $45 per ton transportation and landfill charges quoted will be considered the effective tip fee that would be incurred by local jurisdictions.

Assuming that local governments will attempt to maximize economic efficiency, those counties which face current in-state tipping fees in excess of the out-of-state ($45 per ton) fees are likely to consider exporting their waste to an out-of-state disposal site. For the purpose of this study, it is assumed that the highest priced landfill within each jurisdiction represents the true marginal cost of waste disposal. Therefore, any new landfill constructed after the closure of existing lower priced landfills within the jurisdiction would set its tip fees at or above the highest current tip fee being charged. Seventeen jurisdictions within California currently face maximum tip fees in excess of $45 per ton:

| | | |
|---|---|---|
| Alameda | Amador | Contra Costa |
| Del Norte | Fresno | Humboldt |
| Kings | Lassen | Marin |
| Mariposa | Mendocino | Napa |
| Placer | San Diego | Santa Barbara |
| Santa Clara | Tuolumne | |

Of these counties, Del Norte, Kings, Mendocino and Tuolumne[12] will be in need of new landfill capacity within the next five years[13] (see Table I). Five additional counties have been determined to have a lower probability of exporting their waste including Madera, Marin, Amador Lassen and Humbolt Counties (see Table II).[14]

**TABLE I: HIGH PROBABILITY OF WASTE EXPORT**

Counties with $45 or Greater Tip Fees[15] and
Five Years or Less Remaining Landfill Capacity as of December 31, 1995[16]
OR
Counties Currently Exporting Waste Out-of-County

| | 1994 Export Tonnage | 1994 Disposal Tonnage | Annual Impact on IWMA at $1.34/Ton |
|---|---|---|---|
| Alpine[17] | 3,221 | | ($4,316) |
| Del Norte | | 12,257 | ($16,424) |
| El Dorado[18] | 63,343 | | ($84,880) |
| Kings | | 85,952 | ($115,176) |
| Los Angeles[19] | | 11,328,505 | ($15,180,197) |
| Mendocino | | 42,523 | ($56,981) |
| Napa[20] | | 195,199 | ($261,567) |
| Nevada[21] | 33,027 | | ($44,256) |
| Tuolumne | | 27,950 | ($37,453) |
| **TABLE I TOTALS** | **99,591 or 273 TPD** | **11,692,386 or 32,034 TPD** | **($15,801,249)** |

| TABLE II: LOW PROBABILITY OF WASTE EXPORT | | | |
|---|---|---|---|
| Counties with Five Years or less Remaining Landfill Capacity with Tip Fees Approaching $45 | | | |
| | 1994 Export Tonnage | 1994 Disposal Tonnage | Annual Impact on IWMA at $1.34/Ton |
| Madera | | 88,869 | ($111,084) |
| **TOTALS** | **0** | **88,869** | **($111,084)** |
| Counties with Five to Fifteen Years Remaining Landfill Capacity and $45 or Greater Tip Fees | | | |
| | 1994 Export Tonnage | 1994 Disposal Tonnage | Annual Impact on IWMA at $1.34/Ton |
| Marin | | 334,698 | ($448,495) |
| **TOTALS** | **0** | **334,698** | **($448,495)** |
| Counties with $60 or Greater Tip Fees | | | |
| | 1994 Export Tonnage | 1994 Disposal Tonnage | Annual Impact on IWMA at $1.34/Ton |
| Amador | | 19,939 | ($26,718) |
| Lassen | | 17,238 | ($23,009) |
| Humbolt | | 94,707 | ($126,907) |
| **TOTALS** | **0** | **131,884** | **($176,725)** |
| **TABLE II TOTALS** | **0** | **555,451 or 1,522 TPD** | **($744,304)** |
| **TABLES I & II GRAND TOTALS** | **99,591 or 273 TPD** | **12,247,837 or 33,556 TPD** | **($16,545,554)** |

The impact on the waste stream subject to the IWM fee (landfilled within California) will be affected by the ability of other states to penetrate California's waste market. Two factors that might affect the penetration rate are; 1) available landfill capacity outside of California, and 2) available rail haul capacity.[22] Earlier we established the landfill capacity available for out-of-state waste at 100,000 tons per day in the near-term and 110,000 tons per day in the long-term. Daily tonnage is currently just over 32,000[23] tons for the nine counties[24] cited above which have been determined to have high probability to export their waste (see Table I). Almost 34,000 tons is generated by all of the counties that may potentially seek to export their waste (see Table I & II Grand Totals). Representatives from Southern Pacific Railroad

confirmed that the current Pacific region railroad system could accommodate the entire load.[25] Thus, the upper limit on the volume of waste leaving the state will be constrained by either the amount of out-of-state landfill capacity and by the amount of waste eligible for export. The near-term limit on out-of-state landfill capacity is approximately 100,000 tons per day. The long-term limit will most likely be constrained to 110,000 tons per day. Therefore, more than enough out-of-state landfill capacity will be available and thus waste exported from California will be limited to approximately 34,000 tons per day.

The potential export of 11,692,386 tons of waste annually would result in a revenue loss of over $15.8 million for the Integrated Waste Management Account (IWMA) at its present rate of $1.34 per ton. Total disposal for the jurisdictions considered likely candidates for participation in an out-of-state rail haul program is approximately 12,247,837 tons annually (see Table I & II Grand Totals). This would result in a revenue loss of approximately $16.5 million for the IWMA at the present rate of $1.34 per ton.

## Assumptions and Caveats

Several assumptions and caveats should be examined that could affect the conclusions drawn by this study. The assumptions used in the study and several other factors may increase or decrease the ultimate impact that waste exportation could have on the IWMA. The additional issues and caveats include: 1) assumptions used within the study, 2) the inclusion of Indian reservations as a possible export destination, 3) the effects of Subtitle D on landfill capacity, and 4) various legal issues pertaining to the flow of waste.

This analysis depicts a worst case scenario. Some assumptions were used in this analysis when a lack of information was present. Deviations in these assumptions would alter the conclusions drawn from this analysis. There are two factors which could significantly alter the outcome of this analysis: 1) the assumptions regarding the amount of waste that can be landfilled out-of-state on a daily basis, and 2) the existence of current contracts which could impact the implementation of out-of-state disposal.

The underlying assumption regarding the amount of waste that out-of-state landfills can accommodate does not incorporate existing contracts for the acceptance of waste not originating in California by out-of-state landfills. Pre-negotiated contracts would have priority over new contracts with out-of-state waste generators. Unless special preference is given to host state generators, the remaining capacity would most logically be sold to the highest bidder. The fact that East Carbon Landfill, Roosevelt Landfill, La Paz Landfill, Columbia Ridge Landfill and Lockwood Landfill are all currently soliciting contracts for between $40 and $50 per ton, which is below the cost many counties are incurring for landfill capacity in California. This leads to the conclusion that waste generators in Arizona, Nevada, Oregon, Utah and Washington are not willing to pay the portion of the $40-$50 fee which is a tip fee. Thus, it becomes economically beneficial for the operators of these landfills to pursue contracts with generators willing to pay $40-$50 per ton, namely California generators facing higher tipping fees. Nonetheless, these landfills most likely have existing contracts that must

be honored before California waste can be accepted. The impact that existing contracts have on the amount of landfill space available for California's waste is unknown and may or may not impact the conclusions drawn in this analysis.

## Indian Reservations

Waste would also be considered exported if it were landfilled within an Indian reservation. Due to the fact that Indian reservations are autonomous in the state in which they are located, the Board is unable to levy the IWM Fee on waste landfilled at Indian reservations, including those in California. The same problem will be created for the Board that landfilling in another state creates: diminished revenues for the IWMA.

The Campo Indian reservation has sited a municipal solid waste landfill. This facility could receive waste that is currently being landfilled within the CIWMB's jurisdiction. Thus, it could reduce the amount of waste which will be subject to the IWM Fee.

The Campo Landfill is currently awaiting its permit to operate. Construction of the facility has begun with the installation of the gas monitoring system. The reservation is trying to obtain approval to accept up to 3,000 tons of waste per day.[26] If the project is approved, the reservation will have the potential to accept between 780 thousand and 1.1 million tons of waste per year from California. At the current rate of $1.34 per ton the IWMA could face a $1.05 to $1.47 million reduction in the IWMA, if waste in addition to that estimated in Tables I and II is exported to the Campo Landfill. It is estimated that the Campo Reservation EPA program will receive approval from the Federal EPA in late April 1995.

Although there are over one hundred reservations within California, relatively few have pursued the option of hosting waste facilities. Only one additional reservation has shown interest in hosting a landfill: Los Coyotes. In the summer of 1992 this reservation signed a contract with Chambers Development Corporation to conduct a series of environmental impact studies; however, the company never sought exploration permits which would allow them access to the reservation and the work was never done.[27] Bureau of Indian Affairs officials feel that the two main factors keeping additional reservations from siting landfills are: 1) a lack of land on some reservations (Indian reservations range in size from 12 to 25,000 acres) and; 2) the reservations located near population centers, which generate the bulk of California's waste, do not consider the development of a landfill to be the best use of their property, thus, they pursue other economic development projects.[28]

## Subtitle D

Subtitle D (40 CFR 257 & 258) refers to Federal regulations which specify the minimum requirements landfills must meet to ensure public health and safety. Subtitle D, which went into effect on October 9, 1993, specifies that existing landfills which do not adhere to the requirements specified will either: 1) retrofit to bring the existing landfill into compliance, or



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2) close. Because of Subtitle D, a significant amount of out-of-state landfill space has been developed with the expectation of that a number of existing California landfills would close.

## Waste Flow Restrictions

The exportation of waste will undoubtedly create some problems for regulators in the state of California. If policy makers choose to take action in an attempt to mitigate these problems, the lessons learned from other states may be helpful.

The transfer of waste from one jurisdiction to another and from state to state has created problems for regulators who must carry out state mandated programs. Several attempts have been made to control the flow of waste with varying degrees of success. Some states have tried to control the flow of waste by using financial mechanisms to create incentives or disincentives to transporting waste outside the jurisdiction. Others have successfully banned the transport of waste outside the jurisdiction.

Several states hoping to end an influx of waste from out-of-state have tried to impose fees on imported waste. These fees have been contested as an infringement on the Commerce Clause of the United States Constitution.

Flow laws have been used to control the flow of waste within a state. These laws restrict the flow of waste from leaving a specific jurisdiction. A North Hempstead law in the state of New York which prohibited the flow of waste from leaving the jurisdiction was recently upheld in court.[29] Waste haulers were transporting waste to a nearby jurisdiction's landfill to take advantage of lower tip fees. A newly constructed landfill within the jurisdiction had tip fees far in excess of those in the neighboring jurisdiction. Officials within the North Hempstead jurisdiction argued, in court, that they had built their landfill with the expectation of receiving a certain amount of waste from the communities within their jurisdiction, and that without that waste it would be impossible to plan for the accommodation of future landfill needs. The court agreed with the officials from North Hempstead and the waste generated within the jurisdiction was ordered to be landfilled within the jurisdiction.

While some jurisdictions have successfully controlled the flow of waste in their jurisdiction, other attempts have been blocked by courts. Arguing that any flow restriction is an infringement upon the Commerce Clause in the United States Constitution, rulings in both Minneapolis, Minnesota and Montgomery, Alabama struck down attempts to control the flow of waste.[30]

Transferring waste between jurisdictions and states creates a multitude of problems for government officials. Attempts to control the flow of waste have encountered legal challenges regarding the autonomy of states and the extent to which local governments have a right to control the resources within their jurisdictions. Flow control laws that restrict local flow have been more successful than laws restricting the flow of waste from one state to another.

## Timing

It is likely that by the year 2000 California may only see between 20% and 40% of the potentially exportable waste actually go to out-of-state landfills. This delay will be due to the fact that it will take considerable time for local agencies to decide and then to bid, negotiate and contract for waste export and then to build the needed loading facilities. For example from the time that the South Napa JPA first began soliciting bids, approximately 30 months will have passed before the first export occurs. Thus by the year 2000 annual IWMA revenues could be reduced by approximately $3.2 - $6.3 million given the extended public processes that are necessary to enter into waste export agreements and to build facilities.

## 2. OPTIONS AVAILABLE TO RECAPTURE FEE ON EXPORTED WASTE

It has been determined that should the Board wish to impose a fee on exported waste, additional legal research would be needed and that a statutory modification through legislation would have to be pursued. Current legislation levies the fee at the landfill and exported waste would bypass this point; thus, the exported waste would bypass the fee. Due to the fact that current legislation specifies the landfill as the point where the fee must be levied, any change to include exported waste would require new legislation.

Three possible modifications to the current fee system that would capture revenues from waste being exported have been analyzed: 1) levy the fee on rail haulers exporting waste in conjunction with a fee levied on landfilled waste within California, 2) change the point of fee collection from the landfill to the waste hauler, and 3) levy the fee on waste being exported at the transfer station, in addition to levying the fee on waste landfilled within California. While levying a fee on rail haulers transporting waste out of the state of California, in addition to levying a fee at the landfill on waste disposed within the state seems like a straightforward approach that could be easily implemented, the legal implications of such an approach affect the advisability regarding further investigation. Many aspects of state imposed regulations of railroads are pre-empted by federal law. The imposition of fees or tariffs is very complex and must be done according to specific guidelines and criteria. Conversations with the California Public Utilities Commission, the California Department of Transportation, railroad contacts, and our own legal research lead us to believe that this would be a very complex option to pursue and implement. At this time, it has been decided to focus upon the remainder of its analysis on the options imposing fees on the waste hauler or at transfer stations due to the enormous legal hurdles that staff would have to overcome to pursue and implement a fee levied on rail haulers. Thus, the analysis focussed on the second and third options.

The legal implications and implementation concerns for the remaining two options have been previously analyzed, however, further legal research is necessary. It was determined that the flexibility provided by levying a fee at transfer stations on waste being exported has the potential to provide a more realistic or expeditious option than levying the fee on waste haulers; a less flexible option. The analysis of implementation concerns determined that

levying a fee at the transfer station also results in the least cost option, that could most easily be implemented. Concerns regarding the amount of waste that could bypass the fee were also addressed. It has been determined that there would be some amount of waste that would bypass the fee under either option, however, it is likely that the majority of the fee will be recovered under either scenario. Based on these facts, the most cost effective and straight forward alternative for the Board to pursue is to amend the current IWM Fee structure to include the imposition of a fee at transfer stations on exported waste. However, legal challenges based on the fee for service or fee apportionment tests under the Commerce Clause were identified as potential obstacles. This could be probably be remedied by assessing a lower fee on waste being exported and a higher fee, reflecting the higher level of service provided, at landfills within California. Further legal research and analysis regarding this option is necessary.

The following two sections develop legal and practical implementation criteria for examining the alternatives. These are followed by an examination of the legal and practical implications of each option based on the developed criteria. This is followed by a comparison of the two options. The last section provides a recommendation of the most appropriate method of recovering fees on exported waste based on the examination of the three alternatives.

## Legal Implications

It has been concluded that any fee levied on waste being exported out of California must adhere to four principles: 1) a fee may only be applied to an activity which has a "substantial" nexus within the state which is assessing the fee, 2) a fee cannot discriminate against interstate commerce, 3) a fee must be fairly related to the services provided by the state assessing the fee, and 4) a fee must be fairly apportioned among participants in inter- and intra-state waste disposal. This four part test determines the fee's constitutionality relating to the Commerce Clause.

**Substantial Nexus:** To satisfy the "substantial nexus" test, a fee, wherever it is levied, must be assessed in exchange for services sufficiently connected with California. This requirement should not constitute a major hurdle to the modification of the IWM Fee.

**Fee Discrimination:** A discriminatory fee, for Commerce Clause purposes, is one which benefits in-state fee payers at the expense of out-of-state fee payers. This generally means waste hauled out-of-state is treated differently from waste disposed in-state.

If a fee is found to be discriminatory, either on its face or in practical effect, the State must forward a "compelling interest" to support its discriminatory fee and it must also show that there are no less discriminatory alternatives for achieving the same local interest, or the fee will be struck down as an unconstitutional violation of the Commerce Clause.

A fee is discriminatory on its face, if it appears within the text of the imposing ordinance or statute that one group, usually in-state waste disposers, is benefited at the expense of another

group, such as, out-of-state waste disposers. For example, levying a fee on out-of-state waste disposers and not in-state waste disposers would be facially discriminatory.

If the actual or practical effect of a fee is to benefit in-state interests at the expense of out-of-state competitors, then the fee may be deemed discriminatory in its effect.

If the fee does not discriminate on its face nor in its purpose/effect, that is, the regulation is applied with an "even hand", it appears that the Courts will tolerate moderate burdens on interstate commerce provided the benefits bestowed upon the local community outweigh any incidental burden. Excessive burdens on the free flow of interstate commerce will not be allowed.

**Fee For Service:** The fee must also fairly relate to the benefits provided by the state. The controlling question is whether the state has given anything for which it can impose a fee in return. This element may be of particular concern in the imposition of the Integrated Waste Management fee. Depending upon where the fee is levied, services may or may not have been provided by California in relation to the fee. For example, if the fee is charged too early in the waste disposal process or if it is assessed upon out-of-state waste disposal participants for whom California has provided no services, then the fee may be found unconstitutional.

**Fee Apportionment:** Fees levied must be fairly apportioned both "internally" and "externally" so that they are consistent with existing fee structures.

Internally consistent means that there must be no fee duplication within the fee system. For example, an IWM fee levied at a transfer station may not be duplicated at a landfill when no further services have been provided to support the additional charge.

Externally consistent means that a fee takes only a "reasonable" share of interstate commerce. This is a difficult element to define. Case law clarifies that a state tax or fee must be assessed according to its actual effect upon interstate commerce when considered in conjunction with other provisions. External consistency suggests that at some point a service or activity may become so heavily burdened with fees that additional fees will be determined to be unconstitutional.

**Summary:** The four principles described above are necessary criteria to analyze when addressing each option. If an option clearly fails to meet one of the four criteria, then it cannot be considered a viable option. However, if it is questionable whether the option will fail to meet one of the four criteria, suggestions will be made to strengthen the legality of the option and the option can continue to be evaluated based on the remaining criteria.

All of the options considered levy a fee on waste being generated within the state of California for the purpose of funding waste management within the state. This relationship constitutes a substantial nexus for all three options. Therefore, the examination of the legal

implications for each option will be limited to the last three criteria outlined in this section: 1) fee discrimination, 2) fee for service, and 3) fee apportionment.

## Implementation Concerns

The Department of Finance (DOF) has previously conducted research for the Board on the issues surrounding the development and implementation of various fee programs. Its research identified six major factors that affect the development and implementation of fee programs: 1) legislation, 2) registration, 3) returns, 4) audits, 5) collections and 6) administration. Implementation costs increase as each of these factors becomes more complex. Programs that are straight forward and simple in nature have lower associated costs of collection than programs that are complex and vague. Those programs with the lower associated costs of collection will provide the greatest amount of funding to support the Board's programs.

**Legislation:** Legislation provides the statutory basis for the imposition of a fee. Regulations, if needed, are developed based on the provisions in the legislation. If the legislation is straight forward and clear, then regulations are fairly easy and inexpensive to develop. As the legislation becomes more complex and vague, regulatory development becomes more expensive. There are four components that must be included in fee legislation to facilitate an inexpensive regulations development process: 1) what the fee is imposed on and how much, 2) who will collect the fee and how frequently, 3) where the fee will be deposited, and 4) a source of funding for the administration of the fee program. If the legislation clearly explains all of the components, then regulations may not be needed.

**Registration:** To administer the program, fee-payers must be identified and registered. Every fee program requires establishment of an account under which transactions subject to the fee are reported. The process of account issuance, maintenance, and closeout is collectively called "registration". Generally, registration is the costliest component in setting up a fee program. Two factors affect the cost of registration: 1) identification of the target population, and 2) the number of people or entities that must pay the fee.

If the target population is easily identifiable through the access of public records or other methods, then the costs associated with identifying the target population will be minimized. If there is a clear target population or some existing mechanism to "piggyback", the effort to identify potential registrants is simpler. If there are no public records associated with the target population, then identification becomes more difficult.

Another factor that affects the cost of registration is the size of the target population. The larger the target population, the more difficult and expensive it becomes to register the fee-payers. Correspondence with a larger group is necessarily more expensive than it is with a smaller group. Thus, the least expensive registration program would include an easily identified target population that is small in number.

**Return Processing:** The complexity of the return document and the number of filings are the key elements in determining the resources needed to carry out this function. The return process includes: 1) developing the return, 2) mailing returns, 3) answering inquiries, 4) receiving returns, and 5) reviewing returns. The development of the return is a one time cost, while the other components must be performed each time the fee is due. Therefore, if a return requires the application of a complex formula to determine the fee, on a monthly basis, then the costs associated with processing the return will be great. However, if a return requires the application of a flat fee, submitted on a bi-annual basis, then the costs associated with processing the return will be minimal.

**Audits:** After a fee program becomes established, audits are conducted. The criteria used to pick accounts for audit are based on the potential additional revenue that may be recovered. Ongoing audit activities include selection of accounts, the audit process, billing/refunds, and appeals. Costs associated with auditing do not vary greatly from program to program.

**Collections:** The collection function recovers fees owed due to miscalculations on returns, interest, etc... For the most part, this function is automated and costs do not vary greatly from program to program.

**Administration:** Administrative costs include those that are incurred only to initiate the fee program, and those that are recurring, such as management and support staff. The administration of the fee program is dependent on the number of employees needed to run the program. As the need for employees to oversee the program increases, so do administrative costs. A greater number of employees necessitates a greater number of managers and clerical support, and a greater number of offices that must be furnished. Many of these costs are one time costs, however, a very complex program would incur higher long-run administrative costs.

**Cost Estimation:** The research conducted by the DOF includes cost/benefit ratios for several programs. The cost/benefit ratios represent the percentage of each dollar received that is used to pay for the cost of collection. The following examples were used to gauge the anticipated costs associated with levying the IWMA Fee on various points in the waste stream.

The IWMA's tipping fees were categorized as being straight forward with few registrants, requiring a minimal number of returns. Its implementing legislation was precise, making the development of regulations fairly easy. The 307 registrants were easily identified through the CIWMB's permitting list, and requiring only quarterly payments keeps return processing to a minimum. The resultant cost of collection for the IWMA's tipping fee is 2.28 cents of every dollar in the first year and approximately 0.55 cents of every dollar for subsequent years. The IWMA's tipping fee is the most cost effective fee reviewed by the DOF, thus, each component of this fee will be used to represent low implementation costs in the following analysis.

The California Tire Recycling Program requires that every person who leaves tires for disposal with the seller of new or used tires pay a disposal fee of $.25 per tire. The seller of the tire retains 10 percent of this fee to cover the cost of disposal, the remainder is collected by the Board of Equalization (BOE) on a quarterly basis. The anticipated number of registrants for this program was 67,500. Actually only 11,000 dealers were registered. Each component of the Tire Recycling Program increased the cost of collection. The complicated structure of the program required regulations to clarify procedures. The identification of potential registrants was difficult and required significant resources. Processing the quarterly returns of 11,000 registrants, utilizing a formula to calculate the amount owed, is time consuming. The cumulative effect of these components resulted in 24.25 cents of every dollar generated in the first year the fee was in effect going to cover the cost of collection. However, in subsequent years this factor dropped to about 13 cents percent of every dollar collected. The Tire Recycling Program is one of the least cost-effective fees reviewed by the DOF, thus, each component of this fee will be used to represent high implementation costs in the following analysis.

Fee systems that contain components that fall somewhere in between the characteristics associated with the high and low cost programs described above will be considered moderate.

**Summary:** The fee options will be evaluated based on the practical aspects of implementation: the task should be accomplished at a reasonable expense. If an options fails according to any of the six criteria outlined above, then the option will not be considered viable. However, if an option satisfies each of the criteria, its cost-effectiveness will then be evaluated. Of the six criteria outlined, only three impact an option's cost: legislation, registration, and return processing.

## Waste Haulers

If the IWM Fee structure were changed so that the "point of collection" was on the waste hauler rather than the landfill operator, various issues would have to be addressed. According to our research, there are currently no programs within the United States that assess state fees on waste haulers to support state waste management programs. However, in the states of Oklahoma and Washington, solid waste management fees are assessed upon individual customers of waste collection services. Waste haulers are only one step behind individual waste collection customers in the waste management loop. Thus, many of the problems and benefits associated with levying a fee on individual waste collection customers will be consistent with those incurred if a fee were levied on waste haulers.

**Legal Implications:** As of one year ago, to our knowledge the legality of the fee systems currently in place in Oklahoma and Washington have not been challenged. However, this does not ensure that this method of imposing fees would be upheld should they face legal challenge. An examination of the waste hauler fee option vis a vis its legality follows.

**Fee Discrimination:** When a fee is levied on a waste hauler or a waste collection customer, only waste generated within the state is subject to the fee. There is no evidence that California currently imports waste, thus, there are no out-of-state fee payers to discriminate against. Those receiving benefits emanating from the use of the fees, i.e. residents of California, are the only fee-payers.

**Fee For Service:** This test necessitates that the fee must fairly relate to the benefits provided by the state. This test may pose a problem should the IWM Fee be levied solely on waste haulers rather than landfills, since the benefits of the state's services may vary in each case.

An argument may be made that waste destined for out-of-state landfills should not incur the same fee as waste destined for in-state landfills because the same level of services is not utilized when waste is exported. Currently, the IWM Fee is deposited into the IWM Fund which supports programs implemented by the Board: programs supporting waste reduction, reuse and recycling, and landfill oversight. Waste destined for out-of-state disposal would not benefit from the Board's landfill oversight, thus, it could be argued that a lower level of service is received for waste exported than for waste destined for in-state landfills.

From a practical standpoint, it is nearly impossible to differentiate between waste that is destined for out-of-state landfills and in-state landfills at the point of collection or before the waste is processed through a MRF or transfer station. Thus, it would likely be impossible to adjust the fee to reflect the differing services provided for exported waste and waste landfilled within the state. A fee for service could be subject to legal challenge.

**Fee Apportionment:** If the IWM Fee were levied on waste haulers instead of landfills there would be no fee duplication within the state. Only one fee would be collected on all waste to support Board programs. Thus, the fee would be internally consistent.

The IWM Fee currently supports waste management programs implemented by the Board and landfill oversight. Waste being exported may incur fees to support landfill oversight in its host state. One could argue that if a fee were levied on waste being exported to support waste management programs and landfill oversight that a portion of the fee would be duplicative and externally inconsistent. There is no way to accurately differentiate between waste destined for California landfills and waste being exported if the point of collection for the IWM Fee were changed to the waste hauler. Thus, this does raise some questions regarding the external consistency of levying a fee on waste haulers.

**Implementation:** As stated earlier, we will examine the three elements of implementation that vary in cost: 1) legislation, 2) registration, and 3) return processing.

**Legislation:** If legislation is passed levying the IWM Fee on waste haulers, it is highly likely that a new set of regulations would have to be drafted to replace the current regulations that levy the fee at the landfill. Instead of simply augmenting the current regulations an

entirely new section would need to be drafted, specifying the responsibilities of the waste hauler and the Board.

Information regarding the definition of a waste hauler and the formula for calculating the fee should be explicitly stated in legislation or the responsibility of defining these terms will fall on the regulators. Depending on how clearly the legislation is written, the total cost of drafting regulations could run from moderate, for legislation with explicit language, to high, for legislation that is extremely vague.

**Registration:** The Board of Equalization (BOE) would be responsible for identifying all waste haulers within the state of California. This information is not readily available at this time. A thorough survey of all waste haulers would have to be conducted to determine who and how many haulers are operating in California. Each jurisdiction within California would have to be surveyed to ascertain how many haulers operate there. The haulers would then need to be contacted and an account would need to be established for each hauler. There are currently 531 jurisdictions in California, some of which utilize more than one hauler. Private haulers also exist which contract directly with businesses. It would be difficult to obtain information regarding these haulers from jurisdictions, however, the burden of registering with the Board of Equalization could be placed on the waste hauler or business licenses could provide the needed information. While options exist that could potentially identify the majority of waste haulers, the number of waste haulers that would have to be registered would increase the costs associated with registration. It is estimated the cost of registration to be high based on the aforementioned reasons.

**Return Processing:** The two factors that escalate the cost of processing returns are the complexity of the return document and the number of filings. It is impossible to determine the complexity of the return document without prior knowledge of the formula for the calculation of the fee or the extent of the reporting requirements. Thus, only the number of filings can be examined.

There are a minimum of 531 waste hauler contracts throughout California. Many jurisdictions have more than one waste hauler, some have several. Thus, a conservative estimate of the number of waste hauler contracts is approximately 1000. There is no reason to believe that the frequency of fee collection would be increased from quarterly if the IWM Fee were levied on the waste haulers instead of at the landfills. Thus, we can estimate that approximately 4,000 returns would be processed throughout the year, if the fee were levied quarterly on waste haulers. Considering that the number of registrants for the Board's other fee programs range from 307, filing quarterly for the current IWM Fee, to 11,000, filing quarterly to fund the California Tire Recycling Act, the costs associated with processing returns for a IWM Fee levied on waste haulers are estimated to be moderate.

**Additional Issues:** Two additional issues must be addressed to fully examine the applicability of the IWM Fee on waste haulers: 1) private haulers may not be identifiable, and 2) waste collection is not a mandatory service in some areas.

Many jurisdictions have one or more franchise agreements with waste haulers to service residential customers in a given area within their jurisdictions. These franchise agreements do not always include business customers who often contract with private firms to haul their waste. Some jurisdictions keep records of all waste haulers conducting business within their jurisdictions, while others do not. It would be difficult to identify waste haulers in jurisdictions that do not keep complete records of waste hauling activities. Even if the burden of registration is placed on waste haulers, or business licenses are reviewed to identify waste haulers, the BOE will still be responsible for identifying a large number of registrants. In addition to increasing the cost of registration, the large volume of registrants could make it difficult to identify all registrants resulting in a number of waste haulers that would not be identified and thus, bypassing the IWM Fee.

The second issue that needs to be addressed is the fact that waste collection is not a mandatory service in some areas. In many rural areas throughout the state, waste collection is optional and, in some instances, is not offered at all. Waste generators in these areas generally self-haul their waste to the landfill, thus, bypassing the waste hauler and the IWM Fee. This could have a significant impact on the IWM Account by decreasing the amount recovered via the IWM Fee. The fact that some waste may bypass the IWM Fee, should the fee be levied on waste haulers, leaves those that utilize waste hauling services at risk of being adversely affected by incurring increased IWM Fees to compensate for the loss of revenues due to self-hauling.

## Transfer Stations

The following section examines the legal implications and practical implementation aspects of levying a fee at transfer stations on waste being exported in conjunction with landfills within the state of California.

**Legal Implications:** The imposition of a fee at transfer stations on waste being exported, along with the imposition of the current fee levied at the landfill on waste being disposed within the state is the most viable option. According to our research to date, there are two states that currently levy equivalent fees at landfills and at transfer stations: Vermont and Missouri. To our knowledge, there have been no successful challenges to the constitutionality of these fees. This does not ensure the legality of such fees or that California would not face such a challenge should it decide to enact such a fee, but it does provide evidence that this is occurring and that as a result of legislation and rule making such a scheme can be established and function.

**Fee Discrimination:** Whether a fee is levied at a landfill or a transfer station, it is foreseen that only waste generated within the state would be subject to the fee. Thus, there would be no out-of-state fee payers being discriminated against. All fee payers would be receiving benefits resulting from the collection and use of the fees.

**Fee For Service:** The fee must fairly relate to the benefits provided by the state. It is our opinion that services for waste disposed in-state could exceed services for exported waste. While there is no apparent method of mitigating this effect for a fee levied on waste haulers, there is a way to even the playing field for a fee payer if fees are levied on exported waste at transfer stations in conjunction with waste being landfilled within California.

A more even-handed approach, it seems, would be to levy two levels of fees: a higher fee for waste being landfilled within California to cover the costs associated with the Board's waste management programs and landfill oversight, and a lower fee for waste being exported, to fund waste management programs implemented by the Board. One possibility would be to use the previous year's budget ratios to determine the percentage of the fees that were used to fund waste management programs vis a vis landfill oversight, and then charge a fee for waste destined for export based on costs of waste management programs for the current year. This would provide some assurance that those exporting waste would pay only for the services they receive.

**Fee Apportionment:** If the IWM Fee were levied at transfer stations on waste being exported or at landfills within the state, there would most likely be no internal fee duplication. Legislation would require an either/or statement: the fee would be imposed **either** at the transfer station on waste being exported **or** at the landfill for waste disposed in-state. Thus, fee duplication would be avoided.

The IWM Fee currently supports waste management programs implemented by the Board and landfill oversight. Waste being exported may incur fees to support landfill oversight in its host state. One could argue that if a fee were levied on waste being exported to support waste management programs and landfill oversight that a portion of the fee would be duplicative and externally inconsistent. If the fee levied on waste being exported were prorated to reflect only the cost of waste management programs implemented by the Board in-state, it would likely be determined to be externally consistent.

**Implementation:** The imposition of fees on exported waste at transfer stations in conjunction with California landfills would be relatively straight forward. However, an examination of the three important components is still necessary.

**Legislation:** If legislation is passed levying the IWM Fee on exported waste at transfer stations in conjunction with landfills, only an addendum to the current regulations would be needed. Transfer stations are already regulated by the Board, thus, current definitions for transfer stations could be used, limiting the ambiguity of the legislation. These two factors should help minimize the costs incurred during the development of regulations. It is estimated that costs will be from low to moderate for regulation development.

**Registration:** The registration of transfer stations would only require an augmentation of the current system. Transfer stations are currently required to be permitted by the Board, thus, the target population is known. However, it would still be necessary to determine which

facilities are exporting waste. Several documents could provide this information: 1) SRREs that must disclose a jurisdiction's plan for waste disposal, 2) permit applications for rail transfer facilities at existing landfills and transfer stations, and 3) permit applications for rail transfer facilities at new landfills and transfer stations. It is estimated the cost of registration to be low.

**Return Processing:** Earlier it was stated that the complexity of a return document is impossible to determine without prior knowledge of the formula for the calculation of the fee or the extent of the reporting requirements. However, we do have some knowledge of the current system which could be adapted to include transfer stations exporting waste at little additional cost. If a ratio was used to calculate the fee for waste being exported, as suggested earlier, then costs would increase somewhat.

If each of the jurisdictions who could potentially export waste sited two additional transfer stations to accommodate waste being exported, the total number of registrants would increase from 307 to only 333[31], filing returns quarterly, for a total number of 1,332 returns filed for the entire year.

Considering the variety of mechanisms that can be used to levy a fee on exported waste, it is estimated that the cost of implementing a fee levied at transfer stations in conjunction with landfills is low to moderate.

**Additional Issues:** Two additional issues must be considered when examining the possibility of levying a fee on waste being exported at transfer stations in conjunction with a fee at California landfills: 1) the fact that some haulers that export may bypass transfer stations, and 2) the Board's ability to levy fees at transfer stations that are run by railroads.

After implementing a fee at transfer stations to recover funds from waste being exported, Vermont and Missouri discovered that some of the waste is exported in waste trucks that bypass transfer stations within the state. Regulators within Vermont feel that due to the small size and narrow shape of the state, the majority of exported waste is hauled, by truck, directly out of the state, bypassing the fee levied at transfer stations. Missouri regulators feel that direct haul exporting is most common among border jurisdictions and that they are somewhat successful in recovering fees from exported waste. Their experience suggests that larger states may be more successful at capturing fees on exported waste than smaller states. Due to the size of California and the location of the population centers, it is likely that this would not be a crucial issue for the Board.

Research regarding applying fees to rail haulers found that a fee would most successfully be imposed at transfer stations that are not part of a railroad and where a legitimate state purpose can be shown for imposition of the fee. If waste is hauled directly to a rail transfer station for export and the transfer station is owned and operated by the rail company, then it is likely that it would be more difficult to impose a fee on the exported waste. Thus, it is likely that

some fees could be lost on exported waste, if the transfer stations through which the waste is processed are owned and operated by the rail companies.

## Waste Hauler or Transfer Station: A Comparison

Thus far, the legal implications and implementation considerations have been examined for each option. It is now necessary to compare the two most promising options in an attempt to determine which is most appropriate for implementation.

It is likely that both options could sustain the substantial nexus and fee discrimination tests should they be put forth in a challenge to the constitutionality of a fee, pursuant to the Commerce Clause. However, both options could face legal challenges based on the fee for service or fee apportionment tests. If a fee were assessed on waste haulers, problems could arise if it was determined that the Board is providing two levels of service: one for waste disposed in-state and another for exported waste. Due to the fact that there is no way to accurately distinguish between waste being landfilled within California and waste that is destined for export, it would also be difficult, if not impossible, to structure a fee based on the level of service if the fee were imposed on waste haulers. However, if the fee were levied at transfer stations, a lower fee could be assessed on waste being exported and a higher fee, reflecting the higher level of service provided, could be levied at landfills within California. The flexibility provided by levying a fee at transfer stations provides a more workable option than levying a fee solely on waste haulers.

Implementation costs associated with legislation, registration and return processing were examined for each option. Cost estimates for implementing a fee levied on waste haulers were moderate to high, while estimates for assessing a fee at transfer stations on waste being exported in conjunction with the current system were estimated to be low to moderate. The most glaring difference in cost estimates for the two fee systems is the cost of registration associated with each option. The vast number and unknown population that would incur the fee if it were levied on waste haulers increases the estimated costs associated with registration. The small number of registrants at transfer stations exporting waste would be easily identifiable keeping the cost estimate associated with registration of fee payers low. In conclusion, it appears that the more cost effective point to levy the IWM Fee on exported waste would be at transfer stations, in conjunction with the current system.

Regardless of which option is chosen, there remains the possibility that some waste being exported will never be assessed a fee. Imposing a fee on waste haulers has the potential to reduce the total pool of fee-payers due to the difficulty in identifying all waste haulers in the state and because many individuals in rural areas self-haul their waste, bypassing the point of collection. If a fee were imposed at transfer stations, two potential scenarios could reduce the total fees collected from exported waste: 1) haulers could bypass transfer stations, hauling the waste directly out-of-state and avoiding the fee, and 2) the Board's ability to collect fees at transfer stations owned and operated by rail companies could be restricted. If the Board were unable to identify all waste haulers, the waste stream effectively subject to the fee would

diminish. In contrast, if waste being exported were to bypass transfer stations, levying a fee there would reduce the total amount of fees collected on exported waste. Fees levied on waste landfilled within California would be one hundred percent recoverable. In summary, it seems that the potential loss of revenue from levying a fee on waste haulers exceeds the potential loss from levying a fee at transfer stations.

Given the above comparison of the two fee options, it seems that the most expeditious and cost effective alternative for the Board to pursue is to amend the current IWM Fee structure to include the imposition of a fee at transfer stations on exported waste in conjunction with the current practice of levying a fee on waste disposed in California landfills.

## 3. WASTE MANAGEMENT FEES AT TRANSFER STATIONS

### Issues

**Fee Level:** To ensure that the IWM fee remains equitable it has been suggested that instead of levying the same fee on waste being landfilled within California and waste being exported, that a lower fee be levied on waste being exported, reflecting the lower level of state service provided to waste generators that export waste. The Department of Toxic Substance Control (DTSC) currently does not levy any fee on hazardous waste which is exported. However, the DTSC allocates only 10% of its budget toward the reduction of hazardous waste, thus, due to the fact that the emphasis of the CIWMB's programs are on solid waste reduction, reuse and recycling, any comparison between the CIWMB and the DTSC is inappropriate.[32] The following Board activities are currently funded through the IWM Account: Source Reduction, Recycling and Composting, Ensuring Environmentally Safe Solid Waste Facilities, Local Integrated Waste Management Planning, and Education and Public Awareness.

Source Reduction, Recycling and Composting, Local Integrated Waste Management Planning, and Education and Public Awareness are all performed to mitigate the effects of all waste generated within California. Thus, funding should be obtained by assessing fees on all waste generated within California. Only a portion of the programs that provide for Environmentally Safe Solid Waste Facilities specifically benefit landfill operators within the state. Programs that monitor existing landfills within the state to ensure safety will continue to be necessary, regardless of where a jurisdiction's waste is currently being disposed. However, by exporting waste, jurisdictions prolong the life of their existing landfills and thus, should be exempt only from the portion of the IWM Fee which funds Permitting and Board Review of Environmental Documents. All other functions provided by the Permitting and Enforcement Division must be continued regardless of whether or not waste is exported. The only case in which a jurisdiction would no longer benefit from all the functions of the Permitting and Enforcement Branch is if all waste generated within a jurisdiction were exported and all landfills within the jurisdiction were closed, eliminating the need for monitoring and enforcement. This scenario is highly unlikely and would continue to make the permitting and monitoring of transfer stations necessary. Thus, it seems equitable that exported waste should

be exempt only from the portion of the fee that supports the functions of permitting and the review of environmental documents.

**Personnel Expenditure Methodology:** The CIWMB's personnel allocation is the only budget category that has not fluctuated extensively from year to year. Thus, personnel expenditures were used to determine the ratio of funds allocated toward permitting and environmental review programs to total personnel expenditures.[33] After adjustments were made to reflect reorganizations made within the Board[34], revenue allocated from the IWM Account and the Solid Waste Disposal Site Clean-Up and Maintenance Account (Eastin Account) went to support 104 positions in the Permitting and Enforcement Branch[35]. Of those 104 positions, 26 positions were allocated solely to permitting and environmental review, the only two services which are not provided when waste is exported. A total of 372.5 personnel were funded through the IWM Account and the Eastin Account. Total personnel expenditures for the two accounts were $19.7 million in FY 1992-93 and $20.8 million in FY 1993-94. Expenditures to support permitting and environmental review were approximately $1.2 million for both fiscal years. These figures show that 5.9% and 5.86% of the total personnel expenditures went to support permitting and environmental review in FY 1992-93 and FY 1993-94, respectively. The difference in the two ratios is so slight that it would not affect the size of the fee reduction for waste being exported. Thus, the number was rounded to the nearest tenth and 5.9% is the resultant fee differential.

- **Discount Rate = Permit Expenditures/Total Expenditures**

  Where:

  - **Permit Expenditures** = Personnel Dollars (Including Administrative Support) Allocated for Permitting and Environmental Review
  - **Total Expenditures** = Personnel Dollars Allocated for the IWM Account[36] + Personnel Dollars Allocated for the Eastin Account Total

**FY 1992-93**

- Permit Expenditures = $1,161,542
- Total Expenditures = $19,685,888

- **Discount Rate = $1,161,542 / $19,685,888 = 5.9%**

**FY 1993-94**

- Permit Expenditures = $1,217,696
- Total Expenditures = $20,764,408

- **Discount Rate = $1,217,696 / $20,764,408 = 5.86%**

**Budget Allocation Methodology:** Due to the fact that prior to 1989 the Board's main functions were to permit solid waste facilities, perform environmental reviews, and regulate

and monitor existing landfills, it is also possible to compare total budget allocations for these landfill related activities against total budget allocations for the Board's expanded mandates (AB 939) to determine a discount rate.

The following calculations demonstrate the methodology used to develop a differential fee based on budget allocations; one with, and the other without Used Oil and Tire Recycling Funds:

- **Pre AB939 Budget / Current Budget = Discount Rate**

  Where:

  - **Pre AB939 Budget** = Budget Allocations in Governor's Budget for FY 1988-89 in 1993 Dollars
  - **Current Budget** = IWMA Budget Allocations in Governor's Budget for FY 1993-94
  - Pre AB939 Budget = $6.1 Million
  - Current Budget = $63.3 Million[37]

- **Discount Rate = $6.1 Million / $63.3 Million = 9.6%**

**Methodology Comparison:** For several reasons the personnel expenditure methodology is likely to be more sound than the budget allocation methodology.

1) The figures in the personnel expenditure methodology were based solely on personnel expenditures, thus the allocations from the CIWMB budget to other accounts were systematically excluded. The State Water Resource Control Board and the Recycling Market Development Zone Loan Account each received transfers from the IWM Account in FY 1993-94 of approximately $5 million, while the Solid Waste Disposal Site Clean-up and Maintenance Trust Fund received $8 million. The Recycling Market Development Zone Loan Account benefits waste reduction programs, the transfer to the State Water Resource Control Board is used for landfill monitoring, and the transfer to the Solid Waste Disposal Site Clean-up and Maintenance Trust Fund is used to mitigate pre-existing landfills that pose an environmental threat to the health and safety of the public. Thus, approximately $13 million dollars was transferred to provide services (loans and cleanup) regardless of waste export, while only $5 million was transferred to address needs that would not exist if waste export were utilized.
2) A minimum level of staff are required to cover the administrative duties in any agency. Thus, the pre-AB939 figures above reflect a larger per staff administrative effort than does the current budget figure, this inappropriately understates the staff effort put forth under the current budget which inflates the differential.

3) There was a dramatic shift in resources after the passage of AB939. Comparing the total budgets for FY 1988-89 and FY 1993-94 may be inappropriate due to the shifts in program allocations. The personnel expenditure methodology is based on current budget expenditures rather than the comparison of two years, alleviating this issue.

In November of 1993, AB 1220 (Eastin, statutes of 1993, Ch. 6.56) was signed into law. This law dissolved the Eastin Account and increased the IWM Fee which is deposited into the IWM Account to $1.34 per ton of waste landfilled for FY 1994-95, not to exceed $1.40 beginning FY 1995-96. If the 5.9% ratio is applied to the new IWM Fee as mandated in AB 1220, then the fee would be adjusted from $1.34 to $1.26 per ton for exported waste in FY 1994-95 and there after, not to exceed $1.40 per ton or $1.32 per ton for waste being exported beginning FY 1995-96.

**Future Fee Adjustments:** AB 1220 mandates that the IWM Fee be set annually, leaving the possibility of annually adjusting the amount levied on waste being exported. Fees could be levied equitably in two ways: 1) fluctuating, based on the percentage of the total budget that is being allocated for permitting and environmental review for the current fiscal year, or 2) constant, based on a historical ratio of the total budget, the combined Eastin Account and IWM Account allocated to fund the CIWMB, that was allocated for permitting and environmental review.

A fluctuating fee would require recalculating the percentage of allocations toward permitting and environmental review on a yearly basis. This could result in a time lag between the effective date of the fee and the calculation of the fee. The State Budget is often not signed until after the legislative deadline of July 1 which is the beginning of the state's fiscal year. It would be premature to calculate the fee before the budget is approved. Thus, transfer stations would not know what the fee for the year would be until that year's budget is signed. This could lead to an excess or shortage of fees being collected by transfer station. In addition, the Board would not be able to accurately forecast revenue generation due to the uncertainty of the level of fees imposed on transfer stations.

A constant fee based on the historical ratio of the total budget that was allocated for permitting and environmental review would provide a much more stable and predictable funding source. Since the Board received its mandate to reduce waste by 25% and 50% by 1995 and 2000, respectively, the expenditure ratio of the total budget allocated for permitting and environmental review has changed little from year to year. Thus, it is likely that a set ratio would be extremely close to the actual ratio for any given fiscal year. In addition, a set ratio would allow the Board to make more accurate revenue projections and would eliminate any lag that may occur between the time the fee must be collected and the time the fee can be calculated.

has been legally challenged, a legal challenge may occur some time in the future. Varying fee levels for waste being landfilled within the state and waste being exported, reflecting the level of service provided, should defuse any argument against the fee. As proposed, such a fee could be set equal to the percentage of the total fee that is used to support programs that benefit the generators of waste which is exported. It is estimated that the level of service received by generators of exported waste in California is 5.9% less than the benefits provided to generators of waste landfilled within the state. Thus, the fee on exported waste could be adjusted to reflect this fact.

**How To Set A Differential Fee:** Other states that levy a fee on waste being exported fluctuate their fees either by rule or through legislation which changes the mandate that sets the level of the fee. The current statutory mandate in California specifies the fee level for waste being landfilled within the state. Fees on waste being exported could be based on a constant historical percentage of the services that would be provided for exported waste or based on the percentage of the annual budget which will benefit exported waste which would fluctuate from year to year. While other states that have fluctuating fees have been able to avoid a time lag between the time the fee is set and the time the fee is collected, this would not be possible if California were to base its fee on the percentage of the annual budget which will benefit exported waste. Thus, to ensure that the revenue stream is consistent for both the state, and those incurring the fee, the fee should be based on a constant historical percentage of the benefits that would have been provided for exported waste.

After a thorough analysis it has been concluded that if a lesser fee is levied on transfer stations exporting waste, the fee should reflect the reduced services provided for exported waste: a reduction of approximately 5.9%. In addition, if a lesser fee is imposed on exported waste, it would not only be equitable, but also easiest to maintain a constant ratio between the reduced and standard fees.

Stated briefly, if the Board finds it prudent to adjust the IWM Fee for waste being exported, a fixed reduction of 5.9% would be equitable. However, the Board may find that the reduction in the fee is so slight that the additional effort required to collect two levels of fees is not justified.

## PROS AND CONS OF EXPORT FEE OPTIONS

| Issue | Pro | Con |
|---|---|---|
| Set Differential Fee Levels | Could help mitigate any legal challenge based on the Commerce Clause | Difference in fee levels is so small the extra implementation expense may negate any benefit |
| Periodic Fee Adjustments | Adjusting the fee would reflect the exact ratio of the total fee used to support programs that benefit the generators of waste which is exported | Historical figures show that there is little fluctuation in the ratio<br><br>A time lag between the collection of the fee and its calculation could cause problems for both regulators and transfer stations |

It can be argued that the exportation of waste requires a lesser level of waste management to provide the same benefits that are required for waste landfilled within the state. However, it can also be argued that the exportation of waste will burden the Board with additional tasks, not previously preformed. Existing landfills must continue to be monitored, transfer stations must continue to be permitted and monitored (in fact, the number of new transfer stations that must be permitted may even increase as additional stations are needed to facilitate export), and regulations must continue to be updated. However, the permit and environmental review activities for new and expanding landfills will be delayed, but not eliminated, due to the exportation of waste by extending the life of landfills within California. In conclusion, if a differential fee is levied on waste being exported, the fee should not be discounted in excess of the amount of the total budget allocated to support permitting and environmental review.

Given the different proposed methodologies that can be used to calculate the discount rate, there is little fluctuation in the resultant discount rate. The personnel expenditure methodology calculates a discount of 5.9% based on the budget allocated toward permitting and environmental review. Using the budget allocation methodology, based on the pre-AB939 budget allocations versus post-AB939 budget allocations, the discount rate is calculated at 9.6%. The discount rate calculated using the personnel expenditure methodology is more technically sound than the budget allocation methodology since it is based on actual expenditures.

## 4. WASTE MANAGEMENT SYSTEMS AND INTERNATIONAL EXPORT

Recent developments in waste management include the use of Waste Management Systems (WMS) and the possibility of exporting waste internationally. Both developments have the

potential to result in waste generated within California bypassing both transfer stations and solid waste landfills, thus bypassing the IWM Fee.

## Waste Management Systems

WMS refers to a specially designed container that can be easily transferred directly from a waste collection vehicle designed to haul short distances onto one designed for hauling longer distances (e.g. rail cars, tractor tailor rigs, etc...) without the use of a transfer station. These systems allow solid waste haulers to take advantage of economies of scale by combining small amounts of waste for transport to regional facilities, thus eliminating the need for capital outlay associated with the construction of transfer stations.

There are two factors that affect the economics of waste transportation: 1) the size of the load, and 2) the distance the load must be transported. The use of transfer stations is more cost effective than WMSs for transporting large amounts of waste and/or transporting waste long distances.

According to a representative of Waste Management International, each WMS container can hold approximately 7 tons of waste and each rail car is capable of holding 6 of the WMS containers for a total hauling capacity of 42 tons, while rail cars are capable of accommodating approximately 80 tons. Transfer stations have the ability to compact eighty tons of waste into a single container which fits onto a rail car. Thus, for long-term transportation needs, it is more cost-effective to build a transfer station, than to utilize a WMS.

Another factor which affects the economics of waste transportation is the distance traveled. Opinions vary, however another representative of Waste Management International estimates that for distances greater that 100 miles WMSs lose any competitive advantage they might have for shorter hauls. A representative of Regional Disposal Company concurs with this opinion.

Currently, Waste Management International is using the WMS to transport small amounts of solid waste from Ukiah to Fort Bragg via tractor trailer rig. This system is also being used on the east coast to transport waste across state boundaries and in various locations throughout the U.S. to transport hazardous waste. Due to the short distances and relatively small amounts of waste that are currently being transported via WMSs, any appreciable economies of scale have been achieved. It is thus unlikely that the WMS will be used to transport large volumes of waste great distances due to their inability to economically compete with existing alternatives.

In California, the location of population centers in need of disposal capacity and the volumes of waste generated within these centers preclude the use of WMSs as a cost-effective method of transporting waste out-of-state. Of the fourteen counties most likely to find waste export economical (see page 3), only six counties are located within one hundred miles of the

California border.[39] Only one of these counties has a major population center within 100 miles of the California border. Collectively, these six counties generated approximately 154,130 tons of waste in 1994. Thus, the total waste tonnage that could possibly be exported cost-effectively via WMS is approximately 154,130 tons annually. This number represents the upper limit due to the fact that it assumes that waste being exported is destined for disposal in facilities that are located just across the state line. Therefore, the further the disposal facilities are from the border, the lower the number of tons that have the potential to be cost-effectively exported via WMS.

Should the WMS be used to export waste some time in the future, the potential to include the WMS under the definition of a transfer station could be examined by the Board, thus ensuring that the IWM Fee would not be bypassed. At this time, it appears that export via WMSs will not pose a threat to the integrity of the IWM Account.

**International Export**

Solid waste disposal options may soon expand to include shipping waste to foreign countries for processing and disposal. There has been speculation that if this should occur another loophole in the IWM Fee could be opened.

In a study entitled "Waste Export: Waste Export Options Raise Important Questions for Regional Policy," the Director of the Ventura County Waste Management Department examines a proposed export project that is being developed by Environmental Resources Services and Pace Enterprises of Huntington Beach, California. The study lays out a six step process for the export and processing of waste, four of which are related to the transportation of waste. The following procedures will be used to transport waste to Hainan, China under this proposal: 1) waste collection vehicles will deliver loads to the company's transfer station in the United States for preliminary sorting, 2) waste materials will be loaded into sealed cargo containers, 3) containers will be transported by truck to the port and loaded onto cargo ships, and 4) at the Port of Haikow, Hainan, the containers will be unloaded and taken to the MRF for processing.

According to the aforementioned transportation procedures, waste will be pre-sorted at a transfer station before it is loaded onto cargo ships. This is to allow for the removal of hard-to-handle items and hazardous waste. A WMS could conceivably be used to transfer waste from waste hauling vehicles onto cargo ships, however the same logic used to refute the economic advantages of the use of the WMS in conjunction with rail transportation can also be applied to export via cargo ship. Due to the large quantities of waste that would be transported long distances if export by cargo ship were implemented, the use of a WMS would not be cost-effective. Thus, it is likely, that all waste exported via cargo ship would pass through a transfer station, as described in the project proposal for Hainan, China, where the IWM Fee could potentially be levied.

At this time there are no known cases of international export by cargo ship, thus it is difficult to postulate what might happen in the future. Currently, waste exported internationally would need to pass through a transfer station and could be treated similarly to other exported waste.

**Conclusions**

Any adverse impact to the IWM Account due to international waste export or Waste Management Systems should be minimal.

Proposed legislation should:

- extend the IWM Fee to transfer stations exporting waste, in addition to levying the fee on landfills within California,
- include a discounted fee for exported waste of 5.9%, and
- be flexible enough to allow for additional facilities to be included under the definition of transfer station.

## NOTES

1. Hallissy, Erin, Contra Costa Cities May Use Utah Dump. San Francisco Chronicle, December 14, 1992.

2. In a phone conversation with the project manager for the East Carbon landfill for the state of Utah, Roy Vanos, on January 25, 1993, he confirmed that the East Carbon, Utah site had the ability to expand its capacity by 50% without acquiring additional permits. It was therefore reasoned that if total capacity were increased, the operational space would also increase. The 50% estimate is only a ballpark figure.

3. Hallissy., The life of the landfill was also confirmed by Roy Vanos in a phone conversation on January 25, 1993.

4. This information was obtained from a telephone conversation between staff and Tom Green, representing the Lockwood Landfill, on March 21, 1995.

5. This information was obtained from a telephone conversation between staff and Tom Foote of Kennedy Jenks, representing the Lockwood Landfill, on March 22, 1995.

6. This estimate was given by staff in the Local Assistance Branch of the CIWMB. The March 1992 issue of Landfill Price Digest cited an estimate of $50 per ton in its article LA County Reaches Accords On Rail-Hauling. Even if the higher estimate is accurate, it would have very little net effect on the results presented in this study.

7. This information was obtained from a telephone conversation between staff and Shawn Gutterson, representing the Roosevelt Landfill, on January 17, 1995.

8. This information was obtained from a telephone conversation between staff and Kelly Sarber, representing the La Paz Landfill, on January 19, 1995.

9. This information was obtained from a telephone conversation between staff and Doug Koonan, representing the Columbia Ridge Landfill, on January 26, 1995.

10. This information was obtained from a telephone conversation between staff and Tom Green, representing the Lockwood Landfill, on March 21, 1995.

11. Napa County has a contract with Roosevelt Landfill for $44.07 per ton, rail and tip fees.

12. Alpine and Nevada Counties currently have no landfill capacity; El Dorado County is currently exporting waste according to its SRRE; Napa County has a signed contract with Roosevelt Landfill to export waste; and Los Angeles County is considering export and has conducted a pilot for feasibility of export of waste.

13. The base year for these projections is December 31, 1995. Therefore, as of January 1, 1996 there will be five years of expected capacity left. The total capacity expiring by the end of 2000.

14. Low probability of waste export was based on meeting one of the following criteria: less than five years remaining landfill capacity and tip fees approaching $45; five to fifteen years remaining landfill capacity and greater than $45 tip fees; or greater than $60 tip fees and over 15 years remaining landfill capacity.

15. See Attachment 1 for maximum tip fees of those counties referenced in Tables I and II.

16. Information on landfill capacity was based on preliminary data from a statewide survey conducted by the CIWMB.

17. Alpine County has no landfill capacity. Alpine disposal tonnage taken from its Source Reduction and Recycling Element (SRRE) Table 36B.

18. El Dorado exported 63,343 tons in 1994 according to its SRRE for City of South Lake Tahoe and the unincorporated area of East Slope.

19. The highest Los Angeles County tip fee is less than $45, however since it's currently considering waste export proposals it is therefore there is a high probability it will export waste.

20. Napa County has more than 5 years of landfill capacity but the South Napa JPA is currently under contract to export waste to Roosevelt Landfill in Washington.

21. Nevada County has no landfill capacity. Nevada County disposal tonnage taken from its SRRE Table 2-21.

22. For the purposes of this study, it is assumed that the most likely method of transportation utilized for out-of-state export would be via the railroad.

23. Tons per day calculations are based on a 365 day year.

24. Includes Alpine, El Dorado, Los Angeles, Napa and Mendocino Counties.

25. Interview with Chuck Travis of Southern Pacific Railroad on January 20, 1993.

26. This information was obtained from a telephone conversation between staff and Michael Connolly, Director of the Campo Reservation Environmental Protection Agency, on February 11, 1993.

27. This information was obtained in a phone interview with John Rydzik of the Bureau of Indian Affairs on March 22, 1993.

28. This information was obtained in a March 22, 1993 phone interview.

29. Enos, Gary. Ruling Supports Waste Planning. City and State, January 18, 1993. p 2.

30. This information was obtained from the March 11, 1993 Solid Waste Report in an article titled, U.S. Judge Again Rules for Private Haulers in Flow Control Case.

31. There were 307 landfills that were subject to IWM Fees in 1994. This number was added to an estimated 26 transfer stations that could process waste for export.

32. This estimate is based on the fact that $13.9 million of the DTSC FY 1993-94 budget of $133 million was allocated to "Pollution Prevention, Public and Regulatory Assistance".

33. All transfers are systematically excluded in the personnel expenditure methodology.

34. In recent years, the Board staff has been internally reorganized several times. After each reorganization, tasks performed by staff have remained somewhat consistent, however, positions have moved between offices and sometimes divisions. Thus, it was necessary to track specific tasks and the positions associated with those tasks to compare expenditures from year to year.

35. These positions were part of the Permitting and Enforcement Division prior to July 1993. However, this branch was renamed the Solid Waste Facilities Management Branch in July of 1993 and thus, these positions have been assigned to this new division.

36. Pro-Rated for FY 1992-93, Actual for FY 1993-94.

37. This figure represents the Board's budget for FY 1993-94, excluding Used Oil and Tire Recycling Funds. Appropriations made to the State Water Resource Control Board have been accounted for in this figure.

38. The rule itself does not provide a basis for the calculation of the fee, however, the rule can be changed yearly, increasing or decreasing the fee, to reflect the needs of the account.

39. Those counties include; Alpine, Amador, Del Norte, El Dorado, Lassen and Nevada.

# CURRENT TIP FEES FOR COUNTIES LIKELY TO EXPORT WASTE

| COUNTY | APPROX TIP FEE |
|---|---|
| ALPINE | No Landfill |
| AMADOR | $72 |
| DEL NORTE | $45 |
| EL DORADO | $31 |
| HUMBOLT | $60 |
| KINGS | $55 |
| LASSEN | $81 |
| LOS ANGELES | $40 |
| MADERA | $38 |
| MARIN | $45 |
| MENDOCINO | $84 |
| NAPA | $60 |
| NEVADA | No Landfill |
| TUOLUMNE | $60 |